DOCUMENT RESUME

ED 037 873 EC 005 396

TITLE Instructional Objectives: Developing Teaching Strategies for the Mentally Retarded.

INSTITUTION Iowa State Dept. of Public Instruction, Des Moines.; Iowa Univ., Iowa City. Special Education Curriculum Development Center.

PUB DATE Mar 70
NOTE 45p.

EDRS PRICE EDRS Price MF-$0.25 HC-$2.35
DESCRIPTORS Curriculum Development, *Educational Objectives, *Exceptional Child Education, Individualized Instruction, Inservice Teacher Education, Instructional Materials, Learning Activities, *Lesson Plans, *Mentally Handicapped, *Teaching Methods

ABSTRACT

The general plan of a teaching activity is described in terms of specificity, component composition, and techniques of preparing such plans. Recommendations for writing behavioral and instructional objectives for the mentally retarded are outlined, and writing exercises are presented for practice by the teacher in implementing these recommendations. Examples of lesson plans which include lesson objectives, instructional objectives, activities, resource materials, and experience charts are provided. (RD)

ED037873

SPECIAL EDUCATION CURRICULUM DEVELOPMENT CENTER-
AN IN-SERVICE TRAINING APPROACH...

INSTRUCTIONAL OBJECTIVES:
DEVELOPING TEACHING STRATEGIES for the MENTALLY RETARDED

EC005396

A Cooperative Program Involving The Iowa State Department of Public Instruction and The University of Iowa

ED037873

March, 1970

Printed by
the
Joint County System
of
Cedar, Johnson, Linn,
and
Washington Counties
CEDAR RAPIDS, IOWA 52401

INSTRUCTIONAL OBJECTIVES: developing teaching strategies for the mentally retarded

Special Education Curriculum Development Center - an in-service training project-

Production Staff

S. Bernie Walden, Production Coordinator
Edward L. Meyen, Consultant
*F. Corydon Crooks, Curriculum Specialist
Rita Meyers, Curriculum Specialist
Susan Moran, Curriculum Specialist
Katherine Levi, Graphic Artist
Eleanor Simpson, Assistant Editor

*Major Contributor

Coordination Staff

Frank Vance, Project Director
Jerry A. Caster, Consultant
Jeffrey P. Grimes, Consultant

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

The Special Education Curriculum Development Center has as it main objective the operation of a statewide in-service training program for teachers of the mentally retarded. Twenty special class teachers from different geographic areas of Iowa serve as consulting teachers. They attend training sessions at The University of Iowa and then return to their home area to conduct field sessions. All materials prepared for SECDC are intended for dissemination through the field sessions conducted by the consulting teachers. Persons reading SECDC material but not attending the field sessions should keep in mind that the purpose of the material is to serve as a starting point for in-service training and that the publications themselves are not end products.

It should also be noted that any reference to commercially prepared materials by the Special Education Curriculum Development Center does not constitute a recommendation or endorsement for purchase. The consideration of such material is intended solely as a means of assisting teachers and administrators in the evaluation of materials.

TABLE OF CONTENTS

INTRODUCTION 1

SPECIFITY OF PLANS 2

COMPONENTS OF PLANS 4

Instructional Objectives--Definition 6

Instructional Objectives--Recognition 7

Exercise #1 Recognizing Objectives 9

PREPARATION OF PLANS 10

Exercise #2 Writing Objectives 13

Exercise #3 Writing Objectives 14

Exercise #4 Writing Objectives 15

Exercise #5 Writing Objectives 15

Exercise #6 Objective Analysis 22

Exercise #7 Objective Analysis 23

Exercise #8 Discussion. 26

Exercise #9 Use of Prepared Materials 30

SUMMARY. 36

Rankings of 25 Instructional Objectives by Specialists in Curriculum. 38

REFERENCES 39

SPECIFICITY

The process of education currently is the focus of considerable concern on the part of professional educators, legislative groups, and the general citizenry. One facet of this concern is the teacher's interaction with her pupils. A second aspect is the content of the curriculum; while a third involves the learning process. Finally, a fourth concern relates to the involvement and the behavior of the pupil within the classroom setting. These four factors are interwoven into the everyday happenings in the classroom. The teacher's manipulation of these agents through her behavior, her use of materials and resources, and her pupils should be reflected in her planning.

Basic to any teaching activity is an overall or general plan. This is necessary; it is desirable to have an overview of what direction the educational effort is taking. However, the purpose of this guide is to alert teachers to the following three interdependent functions. Once achieved, these three functions, coupled with good instructional practices, should provide a means of increasing the effectiveness of the teacher in the classroom.

The first function is to alert the teachers of the educable mentally retarded children to the need for SPECIFICITY in the preparation of their lesson plans. This specificity takes on two dimensions. The first dimension is teacher-directed and relates to her use of materials, resources and her function in the classroom. The second dimension is pupil-directed and refers to the goals the teacher sets for the pupils.

The second function of this publication is to orient teachers to the COMPONENTS that give rise to specificity so that a critical evaluation of pupil performance and instructional materials can be made.

The third function is to give teachers the basic TOOLS with which TO PREPARE lesson plans and units which will succinctly yet clearly delineate the teacher's as well as the pupil's activities.

SPECIFITY OF PLANS

Why should lesson plans be specific? To begin with, specificity is important because a definite plan of action, or course to be followed must be known before a lesson can begin or be carried out. A teacher, especially an experienced teacher, can improvise in the classroom and there are times when this becomes a necessary technique in an emergency situation. Improvisation, however, is only a stop-gap technique; the knowledgeable teacher knows that an overall plan is necessary to provide the range of educational experiences desirable for student growth.

Overall or general objectives become a rough sketch of the educational plan for a unit, a day, or even a year. They provide an idea of what subject matter should be taught and what skills should be developed. This scanning of the educational outline is desirable; a rough sketch is necessary to give form to the educational intent. As in any plan, however, the preliminary sketches must be recognized as no more than that--preliminary. An architectural rendering is a refined rough sketch that an architect presents to his client. This rendering is used to demonstrate to the client a solution to his needs. It shows the structure the architect has designed in a pictorial form as he visualizes it. The artist is clever in suggesting details that our imagination completes.

We have indicated that the architectural rendering fulfills a function; it "sells" the client the architect's solution to a buiiding need. In much the same way publishers of commercially prepared teaching materials attempt to sell school boards, administrators, and teachers with a "rendering" or general plan of their product. Parenthetically it might be mentioned here that too often commercial materials are aimed at attracting the purchaser. These "renderings" fall short of their avowed purpose of providing sequentially developed learning experiences appropriate for the educable mentally retarded child. Notwithstanding these occasional shortcomings, it is desirable to have a statement of general intent on the part of the publisher and the teacher.

We have determined that a general overview is appropriate. Such a declaration might be called a GENERAL or GLOBAL objective. In reference to a single concept or lesson this intent is referred to as a SCOPE OF LESSON or SCOPE OF CONCEPT statement. It reflects the span the teacher expects to cover within a lesson or several lessons. It serves as a reminder to the teacher of his intent and should be written in such terms that it will be readily understood by others.

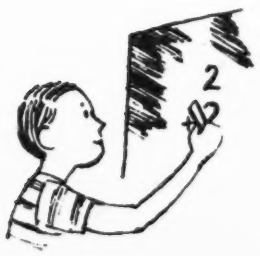
An architectural rending for a new school building, for instance, is a handsome colored sketch showing the proposed building in an idealistic setting. However, the plans the architectural office submits to the school board, state building officials, and the contractors after the renderings have been approved are intensive and detailed. These blueprints are explicit in every detail from the footings poured for the foundation to the specifications for roofing materials. Schematics will be complete for sewage, water, electricity, heating, fire alarms, gas service, and so on. There will be specifications which determine the orientation of the building to the compass. The type and finish of hardware, fixtures, and the color of the chalkboards will all be outlined.

A blueprint or working drawing provides certain specific information for the building or the craftsman. It is an absolute necessity for successful completion of a project, whether it is a toothpick, a Pentagon, or a space vehicle. The product will be a result of the craftsman's skill in working with materials according to a specific plan.

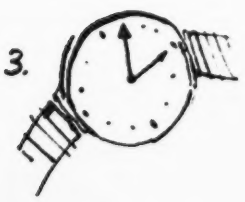
A teacher is also a craftsman but his materials are human, and his tools are instructional materials. His overall plan, or general objective, is comparable to the architect's rendering; the teacher's blueprints are daily lessons and unit plans. His manipulations are concerned with education, or behavioral change. As it is with the builder's blueprints, the teacher's plans need to be specific. The teaching blueprint must carefully and completely outline the educational intent according to certain component functions. Unless this specific plan is followed, the educational process as it is directed by that

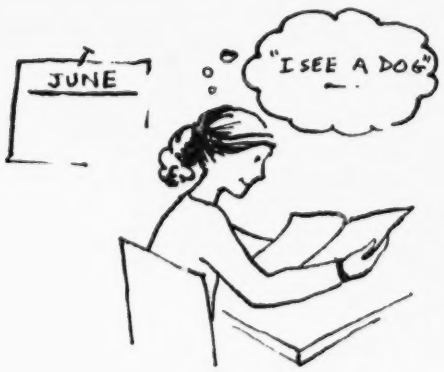
1.

2.



3.





teacher becomes willy-nilly, a catch-as-catch-can situation. The component functions of a teacher's blueprint that relates to behavioral changes in pupils can be inferred in the following three questions:

1. What behavior is desired?
2. Under what conditions shall the behavior occur?
3. How well or how frequently shall the pupil behave in this manner?

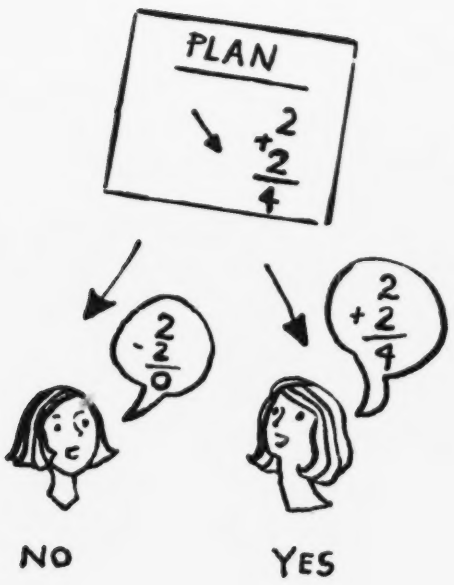
The following sections of this guide will delineate and expand components of the teacher's educational plan and will provide instruction and practice in developing statements which include the interdependent functions that are so necessary.

COMPONENTS OF PLANS

A specific blueprint of the teaching plan, complete with an outline of operations and specifications is essential; this has been established. We also affirmed that the results of any pedagogical effort on the part of the instructor, which is reflected as learning by the pupil, can be observed only as a change in behavior on the part of the pupil. For example, if the lesson were concerned with a reading exercise during which the pupil was expected to read the words, "I see a dog," (words he could not read before the lesson) his change in observable behavior would be the successful reading of these words.

Granted learning is manifested as a demonstrable alteration of behavior, it becomes apparent that our educational blueprint must be delineated by a series of alterations in behavior. In other words, each step in the lesson must be expressed in terms of specific pupil behavior. This could be called the descriptive function of the plan.

When an architect draws a plan he will show that a structural member will be used in a certain place. It is not sufficient to merely indicate the location of timbers. The builder needs to know what type of timber, its dimensions and its compositions. What type of wood shall be used--long leaf yellow pine, fir, hemlock, first or second growth, grade? Is a certain wall to be of cinder or cement block, precast concrete modules, brick, or wood? What are the specifications for the components of the building?



As it is with the architectural plan so it is with the pedagogical one; we need to know more than simply that a certain behavior shall be demonstrated. It is necessary that we have two further specifications related to this change.

First of all, we need to know the conditions under which the behavioral change will be demonstrated. It is fine if the child can read, "I see a dog," if these are the words or activity presented. But if he says, "I see a dog," when confronted with an arithmetic exercise it is obvious that he has not demonstrated an appropriate behavioral change under the existing conditions. Similarly, a child who persists in solving workbook problems, when the announced class activity is an open discussion concerning a proposed field trip, is hardly behaving as we would wish.

The teacher has the responsibility to include in the lesson plan a description of what the pupil's behavior shall be under certain conditions as a result of a specific activity. To reiterate the parallel between the architect and the teacher, the blueprints specify dimensions, materials, exact location and compass orientation, and so on. A part of the teacher's plan includes activities, materials, and the expected behavior resulting from exposure to these activities and materials. The kinds of materials or information that will be given the pupil when he is exhibiting the behavior desired is called the conditional function.

Secondly, it is necessary to specify the degree or limits of the behavior following instruction. To use our former example; if we have instructed a child so that he can read, "I see a dog," we should not expect him to be able to read *Hamlet*. If he is expected to complete simple addition we must re-define simple addition and perhaps supply examples of the problems he should be capable of solving. This component of a delineation of behavioral change is the LEVEL OF ACCURACY or the evaluative function. It describes the performance acceptable as an indication that the child has satisfactorily accomplished a lesson, or a part of a lesson.

Thus far we have considered the need to be specific in lesson plans and units. We have also explored the components that are necessary to supply the specificity that is so important in guiding our pupils through learning experiences appropriate to their abilities. This might be the time to recapitulate and briefly list what the teacher's blueprint should indicate:

1. What the lesson shall accomplish in a global fashion.
2. How the teacher plans to use the instructional materials and other resources he has associated with the lesson.
3. What pupil activities shall be appropriate to utilize the instructional materials.
4. What specific terminal behaviors on the part of the pupils, collectively or individually, will indicate that they have profited from the lesson.
5. Under what conditions shall the terminal behavior be observed.
6. By what criteria shall the teacher measure the terminal behavior to detennine the amount of learning that has accrued? That is, how shall he evaluate behavior?

The features outlined above should be present in the case of both commercially produced and teacher-made plans. It may be necessary for the teacher to make revisions of commercial materials so they are applicable in behavioral terms to a specific group of pupils.

One of the features of lesson plans that are constructed to answer the preceding questions satisfactorily is that they can be tailored to meet the needs of individual pupils with a minimum of effort.

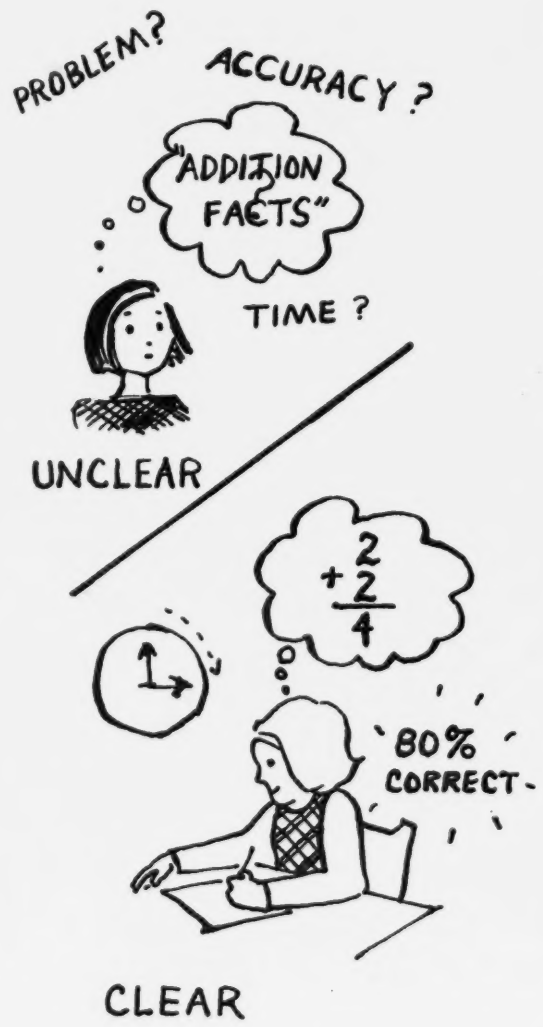
Instructional Objectives--Definition:

It would be expedient to label the steps we go through in administering a lesson. If each step states what we expect the pupils to accomplish we call these steps OBJECTIVES. Since their accomplishments will be observed and measured in behavioral terms, the word BEHAVIORAL is added.

BEHAVIORAL OBJECTIVES is a term frequently used to describe an operationally stated objective. Since we are concerned with a teacher-directed instructional situation we will use the term INSTRUCTIONAL OBJECTIVE most frequently in the balance of this work.

Let us have a quick review by outlining the term INSTRUCTIONAL OBJECTIVE:

1. An instructional objective is stated in terms of pupil behavior.
2. An instructional objective clearly describes what behavior the pupil should exhibit following one step in a lesson or unit plan.
3. An instructional objective outlines the conditions under which the behavior can be observed.
4. An instructional objective states a level of performance that is acceptable as an indication that the objective has been met.
5. An instructional objective, in some instances, prescribes a time limit.



Instructional Objectives--Recognition:

Consider the following objectives and note the development from a typical, but vague objective to one which is specific in the three components:

1. To understand simple addition facts.
2. To demonstrate an understanding of simple addition facts by correctly computing examples chosen by the teacher.
3. To demonstrate an understanding of simple addition facts by correctly computing the sums of pairs of one digit numbers.
4. To demonstrate an understanding of simple addition facts by successfully computing with 80 percent accuracy, the sums of pairs of one digit numbers within fifteen minutes.

The above example number 1, unfortunately, is typical of many objectives printed in commercial materials and written by teachers. The words, "to understand," indicate a type of cognitive behavior we cannot assess without some further qualifications. We can readily observe that none

of the requirements are present. There is no basis for evaluation; interpretation will vary according to the consumer. It is not specific.

In example number 2, there is one qualification for behavior change. "To demonstrate," tells us in order to satisfy the conditions of the objective the pupil must exhibit some overt behavior. However, the remainder of the objective again falls short of our standard. What one teacher calls "simple addition facts," may be completely beyond the ability of the pupils in another teacher's class.

Example number 3 shows further development toward the statement of all the conditions of a complete instructional objective. In this example there are two of the three components given. The behavior is determined by the words, " To demonstrate ... by correctly computing the sums..." It is determined that these sums shall be "... of pairs of one digit numbers..." so the conditions of the behavior are more explicitly defined.

One more condition, the acceptable level of performance, is still lacking. A quick glance at our fourth example shows that this is easily added. We have in number 4, then, a complete objective embodying all of the components considered necessary. The time limit, "...within fifteen minutes," indicates that we expect this performance to be completed within a specific time span in order to satisfy the teacher's criteria for pupil competence in this skill.

The following list of instructional objectives has been selected at random from a variety of sources. They vary in quality from excellent to inadequate. As an exercise in recognition you rank each of these objectives in one of the three columns with a check mark. Column 1 rates the objective as completely acceptable; one which meets all the criteria of a well stated instructional objective. A check mark in column 2 would indicate that you accept the objective as one which meets some, but not all, of the criteria; it would be considered moderately acceptable. Column 3 is for the poor objective, one that is not acceptable and does not meet our criteria for a behaviorly stated instructional objective.

RECOGNIZING OBJECTIVES

Exercise #1

1 2 3

( ) ( ) ( ) 1. To learn appropriate clothing styles for individual types.

( ) ( ) ( ) 2. To be able to choose appropriate clothing given a social situation, and weather conditions.

( ) ( ) ( ) 3. To be able to locate four fishing places, given a general map of the area.

( ) ( ) ( ) 4. To help pupils to understand the reasons for specific bicycle rules.

( ) ( ) ( ) 5. To develop an understanding of the concept of budgeting money.

( ) ( ) ( ) 6. Given a list of twenty assorted statements, underline the ten which correctly state factors which contribute to safety in a swimming pool.

( ) ( ) ( ) 7. To recognize the months in reading.

( ) ( ) ( ) 8. To write the correct answers in the spaces provided to at least eight out of ten simple addition problems involving pairs of one digit numbers presented in linear form. Example: 2+ 3=_____

( ) ( ) ( ) 9. To compare a photograph and a drawing or sketch.

( ) ( ) ( ) 10. To understand the concept of juvenile status.

( ) ( ) ( ) 11. To successfully negotiate a ten gate slalom course on a twenty degree (average) slope without falling or missing any gates on three out of four runs.

( ) ( ) ( ) 12. To really understand the concepts of form and balance in art.

( ) ( ) ( ) 13. To verbally state one's name, address, and telephone number on command.

( ) ( ) ( ) 14. To recognize that proper health habits affect one's personal appearance.

( ) ( ) ( ) 15. To be able to identify cities, roads, towns, and rivers on an Iowa road map.

( ) ( ) ( ) 16. Circle the correct answers to multiplication problems.

( ) ( ) ( ) 17. To be able to list substances around the home that are poisonous.

( ) ( ) ( ) 18. To set up and prepare for projection (including threading film, screen, preparing stand or table, and making all belt and electrical connections) a movie projector of the type currently in use in the school.

( ) ( ) ( ) 19. Demonstrate competence in trouble shooting TV circuit by tracing the circuity of assorted TV sets from diagrams.

( ) ( ) ( ) 20. Demonstrate ability to use a hand saw by choosing the proper saws and making both rip and cross cuts cutting a 12'' x 5'' piece from a 12-inch wide by random length one-inch pine. The accuracy shall be to within 1/8''.

( ) ( ) ( ) 21. Develop the concept of money and its uses.

( ) ( ) ( ) 22. Write the numerals from one to ten inclusive on command with no hesitation.

( ) ( ) ( ) 23. Learns to know the reasons for highway traffic laws.

( ) ( ) ( ) 24. To encourage pupils to use their fingers as an aid to simple arithmetic problems.

( ) ( ) ( ) 25. To correctly compose and write a letter asking for a job interview.

The above list of instructional objectives has been ranked by five specialists in curriculum. After you have completed your evaluation of these instructional objectives, turn to the back of this book and compare your results with those of the specialists.

PREPARATION OF PLANS

The final task of this book is to provide teachers with the techniques necessary to write instructional objectives in behavioral terms and to include in these objectives the conditions and the level of performance that shall be expected.

It is assumed that the level of ability and other information of educational significance concerning the pupils will be known before there is an attempt to compose objectives.

The first task in writing instructional objectives involves a careful analysis of the lesson. This is perhaps the most valuable step in the production of instructional objectives, since the teacher is forced into a job analysis. It is impossible to make vague, grand statements and to indulge in educational gobbledegook when engrossed in the details of a job analysis. It is necessary to become involved with each behavioral step in a learning task. The job analysis in this case involves a breakdown of the lesson into short, sequential learning steps; steps within the capability of the pupils for whom the lesson is being planned. An aid in the behavioral analysis of a lesson is to outline the activities to be used by the pupils and the teacher in the classroom in a parallel development with the objectives.

The second task in preparing instructional objectives is to definitely state in the opening words of the objective what the student shall do.

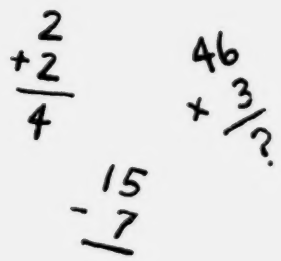
There are words that express a cognitive state in the pupil which are difficult to observe or measure. These should be avoided unless they are qualified by some behavioral terms. The following list is representative of these vague (but all too familiar) terms:

has knowledge of	*to believe*
to appreciate	*to enjoy*
to understand	*to grasp*
to comprehend	*to know*

A list of action words that are more specific would include the following:

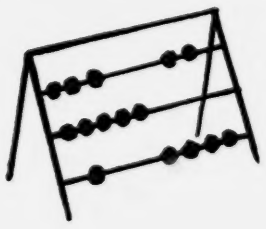
to identify	*to write*
to compute	*to solve*
to compare	*to list*
to recite	

The above words, in being more specific, avoid or discourage misunderstandings. A supervisor, building principal, or a substitute teacher will readily understand the intent of the person who wrote the objectives. These words indicate a type of action that can be observed.



"COMPETENCY LEVEL"

After stating that a child shall list, write, compute, or verbally state some action it is necessary to set the conditions of the behavior. For example, if the task is to compute addition problems, it becomes essential to determine what sort of problems shall be involved. Shall this be an exercise including only pairs of numbers several digits long and involving carrying? Will the problems entail addition of long columns of numbers? Will this involve decimals or dollars and cents? Are negative numbers to be included? In other words, what level of difficulty in addition is the pupil expected to master?

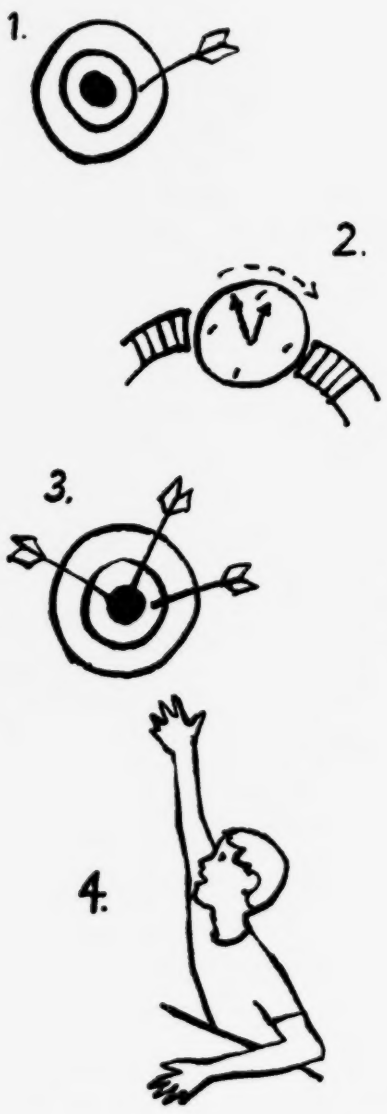


"TOOLS"

In company with the competency level it is necessary to stipulate the tools and materials involved. These could include the chalkboard, seatwork, a programmed test, a teaching machine, an abacus or a calculator. It is necessary to ask if the work will involve abstract concepts totally, or will concrete objects such as beads or blocks be employed?

Subsequent to the conditions of the behavior is stating the level of performance that can be

"CRITERIA"



accepted as an indication of adequate or satisfactory learning. The level of performance, or criteria level, can be specified several ways. Note the following examples:

1. Percent or proportion correct.
   Examples: *80% of the time*
   2 out of 3 correct
   at least 1/3 correct
   with 90% accuracy
2. Within time limits.
   Examples: *immediately*
   within 15 minutes
   during the class discussion
   during the week following
3. Numerically specified limits.
   Examples: *at least six times*
   make at least one oral contribution
   successfully executed every time
4. Limits stated in terms of involvement.
   Examples: *freely participates in the discussion*
   volunteers information
   verbally responds

It is in setting the conditions and level of performance that our job analysis proves its value. We are especially concerned with being reasonably certain that the tasks we require of mentally retarded children be within their ability. By fragmenting a lesson into several operations we can easily assess the steps and modify them through the statement of objectives so they will be within the functioning level of the pupils in any particular class. It has been mentioned that following the opening action phrase (to write, to verbally list) an instructional objective is completed by determining the conditions and performance level. These conditions are governed by the results of the job analysis. The point is, there is a concern that teachers learn to write and use instructional objectives. But the concern also extends to the point that teachers have their objectives (and consequently their lessons and units) appropriate for their pupils.

Now for an exercise in writing some instructional objectives. This will be done in easy steps and you, the reader, should write your development in the space provided. A sample instructional objective will be developed along the steps we have discussed. You follow the example and generate your sample objective in the lined areas.

WRITING OBJECTIVES

Exercise #2

1. Select teaching area.
   Example: Mathematics

   Your area: _____

2. The sub-area of the subject is next. Here you begin to be specific.
   Example: Recognition and use of number symbols; writing arabic numerals.

   Your sub-area: _____

   _____

3. Specify the behavior that will initiate the objective. This is the descriptive function.
   Example: To write . . .

   Your action words: _____

4. Next specify the conditional function of the objective.
   Example: . . . arabic numerals from one to ten . . .

   Your conditions: _____

   _____

   _____

5. And finally the level of performance that you will accept, the evaluative function.
   Example: . . . legibly and with no hesitation.

   Your standard of acceptable performance: _____

   _____

   _____

   _____

6. Now put all of the parts together and view the results.
   Example: To write arabic numerals from one to ten legibly and with no hesitation.

   Your finished instructional objective:

   _____

   _____

   _____

Now having written a single instructional objective, practice writing more objectives, but this time in specified subject areas.

Assume that you are planning to teach a unit in science and that the subject for the day is local weather and how people adjust their lives accordingly. You are to write an instructional objective that will be appropriate for the intermediate educable mentally retarded (C.A. 9-12). This objective shall cover an activity or segment of the lesson concerned with clothing and the seasons. It would be advantageous to do this by developing the objective employing the same techniques utilized in the first writing exercise.

WRITING OBJECTIVES

Exercise #3

1. Area: Science
2. Sub-Area: Weather and Clothing that would be appropriate for the typical Iowa seasons.
3. *Now state the pupil's terminal behavior:* _____

   _____
4. *Next outline the conditions:* _____

   _____
5. *Then, what level of performance will you accept?* _____

   _____
6. *Finally, evaluate your work, make any necessary changes, and write your completed instructional objective:* _____

   _____

   _____

   _____

Very good, so good in fact, that it would be an excellent idea to try it once more. This time, though, you are on your own; a subject will be given and you take it from there.

Use the area of reading and build your own sub-area, behavior, conditions, and performance level.

WRITING OBJECTIVES

Exercise #4

1. Area: Reading
2. *Sub-Area:* _____
3. _____
4. _____
5. _____
6. *The complete instructional objective:* _____

The third time you do this select an area, specify the sub-area, and use the space provided below for the final draft of a complete instructional objective

WRITING OBJECTIVE

Exercise #5

Area: _____

Sub-Area: _____

Instructional Objective: _____

At this point it is assumed that you have become rather accomplished in writing individual instructional objectives. The next task is to develop the skill of incorporating a series of related and sequentially conceived instructional objectives into a lesson. Now you must do the lesson analysis mentioned earlier. This is necessary in order to determine and to arrange the steps that will move the retarded child into a subject and through a series of learning experiences.

The following example is from the SECDC publication, *Life Experience Starter Units, Set Number 2,* pages 78-79.

LESSON #1

SCOPE OF LESSON:
1. To introduce and create interest in a unit on pets.
2. To develop an understanding of the responsibility one accepts when he has a pet.
3. To orient the child to proper pets for various situations (city, apartments, farm, etc.)

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART
1. To show an interest in the pet unit by volunteering at least one pet story for the class. 2. Given a bulletin board of animal pictures students should be able to identify those animals considered good pets. 3. Identify from pictures those pets suitable for the city.	1. Count the children who already have a pet. Have each child tape a picture of his pet next to his name on an experience chart. Count and compare to see which is the most common pet among class members. Ask those children who do not have a pet, which pet they would prefer and place that picture next to their names. 2. Discuss the bulletin board. Discuss each picture and determine if it would be a good pet. If so, pin a strip of yarn from the picture to the cage. Ask which animals would make a good pet for each child. 3. Write a caption for the bulletin board. 4. Discuss which pets on the bulletin board would be suitable for the city and which would be better on a farm. 5. See the movie, City Pets, Fun and Responsibility (S.U.I. #3728) 6. Write an Experience Chart on the city pets. Read orally. 7. Play a guessing game. Have the children make up riddles about pets. The teacher should begin with an example: "I am thinking of a pet. It likes to run and play. It chews bones. It is a . . ." 8. Discuss the safety of pets around younger brothers and sisters.	3x5 cards containing pictures of various pets. Chart paper with each child's name on it. Pictures of an elephant, giraffe, lion, dog, cat, fish, rabbit, horse, hamster, cow, lamb, guinea pig and a parakeet. Diagram of a cage in the middle. Yarn strips Mimeo sheets Scissors	City pets are usually smaller than farm pets. City pets do not need as much space as farm pets. Some city pets are: dog, fish, cat, guinea pig, parakeet, and hamster.

LESSON #1 (cont.)

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART
	9. Seatwork: On the first sheet are sketches of various animals, some of them city pets. On a second sheet two columns are labeled. The first column has a picture of a barn at the top, and the second has a picture of a house. The children are to cut out the pictures from the first sheet and paste them under the appropriate column - the barn or house. 10. Vocabulary: pet, animal, dog, cat, fish, lion, elephant, giraffe, cow, lamb, rabbit, parakeet, horse, lamb, hamster, guinea pig, farm, city, space, smaller.	Paste Stories about various pets should be placed around the room prior to the unit's introduction. Some suggestions are: A Puppy For Keeps, Hawkins, Quail, New York: Holiday House, 1946. The Pet Show, Beebe, Catherine, N.Y.: Oxford Univ. Press, 1946. Burlap, Denis, Morgan, Eau Claire, Wis.; E. M. Hale & Co., 1945. Widget, Newberry, Clare T., N.Y.; Harper & Harper Pubs., 1958.	

This lesson is part of a unit on pets and was written for the primary level educable mentally retarded. Take a close look at this lesson. Notice that although there are ten activities involved, only three instructional objectives were considered sufficient to outline and delineate the behavioral changes desired by the writer.

Let us take more than a cursory look at these three objectives. Does each of them meet the previously stated criteria for an instructional objective? The first one would seem to. The behavior desired is "To show an interest . . . " Although INTEREST is hardly an observable behavior, it was qualified in the conditions, as, ". . . volunteering at least one pet story . . ." Here is the condition of the behavior and the level of performance, "one," all in a very simple and concise statement.

The second objective is vague. It does not meet our criteria for a completely acceptable instructional objective but, at the same time, it should be sufficient to our needs.

The third objective is deficient. Since it is so similar to objective number 2, there is an accumulation of vagueness. A better phrasing of the third objective would be, "indicate verbally at least three pets suitable to keep in a city home from the assortment of animal pictures used throughout the lesson."

The following example is also from *Life Experience Starter Units, Set Number 2,* pages 112-113. This lesson was written as part of a unit concerned with recreation and is for use at the intermediate level. Read it critically.

LESSON #8

SCOPE OF LESSON:
1. To discuss cycling as recreation.
2. To develop an awareness of the need for keeping bikes in good working condition.
3. To begin the study of traffic laws and regulations.
4. To emphasize safety in cycling.

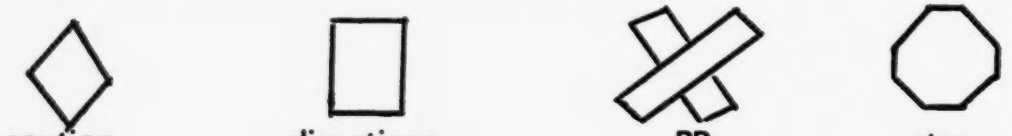
INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART
1. To be able to point out five important mechanical features of a bicycle and to tell how they contribute to safety. 2. To be able to list four recreational uses of a bicycle. 3. To recognize four basic traffic sign shapes and what they represent. 4. To safely demonstrate the ability to ride a bike to a nearby park.	1. Discuss with the class their experiences with bicycles. Count those who have bicycles. Write the number on the board. Count those who can ride a bike and record on the board. 2. Bring two bicycles to the room, one in a very poor condition and one in good condition. Point out the relative condition of the brakes, for example, and stimulate discussion related to the safety of each by asking: a. Which would you rather ride? Why? b. What might happen if you were riding down a steep hill on the poorly kept bike? c. How could this be prevented? Proceed in a similar fashion with other bike parts, i.e., a. head lights b. reflectors c. sprocket guard d. fenders e. properly adjusted seats, handlebars, etc. f. tires 3. Have the students write down as many uses as they can for a bicycle. Put those related to recreation on the blackboard. Be sure to expand the uses if some are left out; i.e., a. takes us to parks, fishing, movies, etc. b. scenic rides c. racing	Bicycles Film: "Bicycle Safety Bulletin board materials	Biking and walking are the most important ways we get places. Besides transportation, a bike can be fun. We can ride in the country, race, go on picnics, and keep in shape. We must keep our bikes in good condition and obey the safety rules. Today we showed how to ride safely and enjoyed our outing to the park.

LESSON #8 (cont.)

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART

4. Show the film, "Bicycle Safety" which illustrates the duties of the bicycle rider in maintaining his bike and obeying all traffic rules.

5. Construct a bulletin board using construction paper and magic markers to illustrate the basic traffic signs:



caution directions RR stop

6. Take a bike ride to a nearby park emphasizing the safety rules and traffic regulations:
   a. signal when turning
   b. stop completely at intersections
   c. always keep both hands on handlebars
   d. be alert for traffic
   e. keep bike in good working order

Three of the four objectives written into this lesson are very good. These three (numbers 1, 2, and 4) indicate the behavior desired, the conditions of the behavior, and each specifies a performance level. As an example, consider the first objective of Lesson 8. "To be able to point out five important mechanical features of a bicycle and tell how they contribute to safety." Dissect this instructional objective and in the spaces provided indicate each of the components that have been discussed.

OBJECTIVE ANALYSIS

Exercise #6

1. *The behavior desired:* _____

   _____

2. *The conditions of the behavior:* _____

   _____

   _____

3. *The level of performance expected:* _____

   _____

Did you write in the first space, "To be able to point out" and "tell?" If so, you are correct.

In the space provided for conditions, number 2, you should have written, "important mechanical features of a bicycle," and "contribute to safety." Were you right?

The level of performance was not complicated; one word, "five," indicates the level of performance expected.

Look at the second objective in Lesson 8 now. It reads, "To be able to list four recreational uses of a bicycle." Analyze this and see if you can discover the components to your satisfaction.

OBJECTIVE ANALYSIS

Exercise #7

1. _____

_____

2. _____

_____

3. _____

_____

Do this also with objective number 3, "To recognize four basic traffic sign shapes and what they represent." Is something missing? If you cannot find a clear statement of behavioral change, you spotted it! "To recognize" is not a definite statement of an observable behavior. "To recognize" should be defined by some overt observable action by the pupil.

Rewrite this objective in the space provided: _____

_____

_____

_____

As a final exercise from the SECDC publication, *Life Experience Starter Units, Set Number 2,* pages 128-129, intermediate level, consider the following lesson. On the discussion sheet write your evaluations of the three objectives in this lesson. If you think that it should be rewritten, do it.

LESSON #1

SCOPE OF LESSON:
1. To stimulate interest in studying Iowa by associating local communities and points of interest with the larger ones of the state.
2. To acquaint the students with local points and facilities of interest.
3. To become aware, in a relative way, of the distances between various points in the state.

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART
1. To demonstrate an interest in the unit on Iowa by participating in a class discussion centered around familiar landmarks. 2 To locate Iowa towns and landmarks on a worksheet map. 3. To demonstrate an understanding of the concept of relative distance by comparing and verbalizing the distances between points on an Iowa map.	1. Introduce the unit by creating an opportunity for discussion of towns that the children are familiar with in Iowa. These may be places they remember visiting such as grandparents' homes, vacation spots or places they have heard about. Attempt to include all of the children in the discussion. Encourage the students to elaborate on their experience to the extent that they show enthusiasm. As the towns are named or described the teacher will mark the approximate position of the town on the large map (oaktag) at the front of the room. The children will mark the location on their outline map (work sheet) according to the areas in Iowa. As a group activity we will estimate which, between two towns on our map, would be closer and which further from our community. 2. View the movie appropriate for the area of Iowa in which the school is located (i.e., Northeast, Southwest, etc.). The teacher will provide the narration relating the local community to the wider areas of the film. She should point out: a. The recreational features in the nearby towns and parks not offered in the local community.	Worksheet #1 Iowa map divided into quadrants. Large oaktag sheet with the perimeter of Iowa outlined. Magic marker Movie: "This is Iowa-Northeast Iowa Area." Obtain from the University of Iowa A-V Center #I-5642 (see film list for other films).	(Example) Davenport is one of many towns in Iowa. Some Iowa towns are close to Davenport and some are far from Davenport. Towns can be found on maps. People do different things in different towns. In the movie, we say Iowa has farms and cities. There are parks and highways in Iowa too. Iowa farms grow crops and farmers raise animals.

LESSON #1 (cont.)

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART

b. The historical points of interest around the general area, i.e., Hoover Memorial, Spirit Creek Battleground, Little Brown Church, etc. (These might serve as topics for oral reports.)

c. The occupational similarities and differences between the local town and the general area.

3. Write an experience chart concerning the day's activities.

4. Vocabulary: Iowa, crops, maps, towns, close, far away.

DISCUSSION

Exercise #8

We have mentioned adapting commercial materials and incorporating them into lesson plans using behaviorally oriented terms. As an example we will construct instructional objectives for the use of some materials published by Developmental Learning Materials[1] (DLM). One of the DLM kits is called *Animal Puzzles.** These are pictures of eight different animals, each a separate puzzle. The puzzles are quite simple, having from five to eight non-interlocking pieces. The animal pictures are cut so that the readily identifiable body parts are in separate pieces. A method of including *Animal Pictures* in a lesson plan is demonstrated in the following:

[1] DLM, 3505 North Ashland Avenue, Chicago, Illinois 60657

*The instruction manual for DLM materials suggests that *Animal Puzzles* could be used with children with perceptual problems. They would also be useful in primary level classes.

LESSON #1

SCOPE OF LESSON: 1. To discuss animals and their body parts.
2. To relate animals to humans.

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART
1. To correctly assemble each animal puzzle within five minutes. 2. To demonstrate knowledge of animals by correctly naming each of the eight animals on the puzzles. 3. To demonstrate knowledge of body parts by naming them correctly as the puzzle pieces are placed in the puzzle. 4. To be able to show knowledge of animal parts by naming, without hesitation	1. Introduce the DLM *Animal Puzzles* and have each child work at assembling them. As each succeeds, have him trade puzzles with another child. 2. Involve the pupils in a discussion of animals and their main body parts (head, eyes, nose, ears, body, legs, wings). 3. Conduct a discussion of the eight animals represented on the puzzles and ask the children to name them as they are pointed out. Conversely, have the children take turns pointing to an animal as its name is called out by another child. 4. Have each child demonstrate to the class the assembly of at least one puzzle, naming the body parts as he places the puzzle part in place. 5. Using the opaque projector, or transparencies, project pictures of the animals represented on the puzzles and ask the children to name body parts as they are pointed out. 6. Discuss the parallel between the human body's main parts and those of animals. 7. Have two or more puzzles mixed together (dictated by the ability of the pupil) and have the children sort them and reassemble the puzzles.	*Animal Puzzles* Developmental Learning Materials, 3505 N. Ashland Avenue, Chicago, Illinois 60657 Opaque Projector Overhead Projector Transparencies Screen	1. We know these animals when we see them. a. cat b. chipmunk c. cow d. deer e. dog f. horse g. rooster h. squirrel 2. We know that animals have heads, eyes, ears, noses, front and back legs, a body and so do we. 3. We do not have hair or fur or feathers like animals do.

LESSON #1 (Cont.)

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART
any part the teacher points to on any completed puzzle.	8. Project pictures showing several animals (circus, barnyard scene, etc.) and ask children to point out the ones that are on the puzzles. These can be the same animals or different breeds.		4. Animals of one kind may not always look exactly alike.
5. To be able to compare animals to humans by verbally stating relationships. Example: "The dog has four legs and I have two arms and two legs." Or, "We all have two eyes."			
6. To be able to show discrimination of parts of different animals by successfully assembling the mixed up pieces of two puzzles.			

USE OF PREPARED MATERIALS

Exercise #9

The next exercise is for you to write a lesson that utilizes some commercially prepared materials. Follow the steps as they are outlined by writing in the spaces provided.

1. Select a published instructional material that will have application in your classroom.

2. Carefully read the teacher's manual to determine the goals intended by the authors. These may be explicitly or implicitly stated.

3. Transpose these goals into reminders to yourself as to the content of the lesson. These will be the "Scope of the Lesson" and should be written in the space provided at the head of the lesson plan form.

4. List the operational steps that will be necessary to accomplish these goals.

5. State the operational steps in behavioral terms as instructional objectives in the appropriate column on the lesson plan form.

6. Coordinate classroom activities and resource materials with the objective and write them under the appropriate headings.

7. Complete the lesson plan by writing the experience chart column as you would expect the children in your class to construct the experience chart.

LESSON #

SCOPE OF LESSON:

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART

LESSON #

SCOPE OF LESSON:

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART

LESSON #

SCOPE OF LESSON:

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART

LESSON #

SCOPE OF LESSON:

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART

LESSON #

SCOPE OF LESSON:

INSTRUCTIONAL OBJECTIVES	ACTIVITIES	RESOURCE MATERIALS	EXPERIENCE CHART

SUMMARY

It should be apparent now that an instructional objective is evaluated on the basis of the three points previously listed. In capsule form these three are, OBSERVABLE BEHAVIOR, CONDITIONS OF BEHAVIOR, and PERFORMANCE LEVEL. These three must be satisfied in any instructional objective regardless of subject matter, academic level, or age level of the pupils. A re-evaluation of the twenty-five instructional objectives you rated earlier is appropriate now. Do this and compare your second ranking with that of the curriculum specialists. The results of the second ranking should be closer to the specialist's evaluations.

The skill in writing instructional objectives can be gained only by (a) making the effort to write them and (b) critically appraising the results by applying the following three questions to them:

1. Is it stated in terms of OBSERVABLE pupil BEHAVIOR?
2. Does it set the CONDITIONS of the behavior?
3. Is the acceptable level of PERFORMANCE stated?

Acquiring proficiency in recognizing and writing instructional objectives will serve the neophyte and experienced teacher alike. This skill will permit a basis for critically evaluating commercially prepared materials because (a) the teacher will more readily deduce strengths and weaknesses in materials and (b) teachers can facilitate adapting a variety of materials to the particular needs of a class.

The skill in writing instructional objectives becomes a valuable tool for the special education teacher. Of necessity these teachers prepare many of their own instructional materials. Included in these materials will be daily lesson plans and life experience units. Hence, an adeptness in writing instructional objectives will facilitate the preparation of these materials.

An expanding file of well-written materials is valuable. Teachers can share their classroom successes by reproducing their best materials and trading them among their fellow professionals. Any

sharing of this sort, of course, lessens the need for individual preparation. The cumulative effect of this give-and-take over a few years could result in a wealth of teaching material. However, a judgment of the final value of any of these materials will rest on their applicability; this in part depends on the skill and care involved in their production.

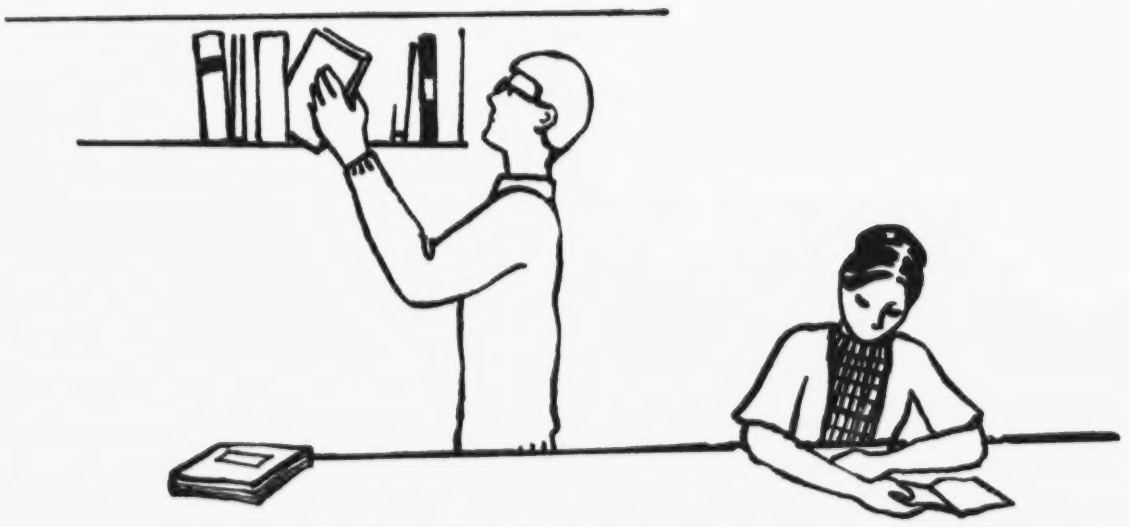
There is one essential point that must not be neglected. For all the care and skill that goes into writing instructional objectives for units and lesson plans it must be remembered that these materials must be adapted to meet the needs of each class. Although general objectives may apply to several groups, specific instructional objectives will require degrees of modification each time the materials are used. This is, of course, due to existing individual needs and differences. A value of teacher-tailored or teacher-written instructional materials is that they will be more sensitive to individual differences.

The success or failure of a lesson or unit is dependent on many factors. One of the most crucial variables is the teacher's initial planning and modification of the instructional objectives with precision and sensitivity. The outcome of a lesson can hinge on the completeness and specificity of the teacher's planning of the lessons and the statements of instructional objectives. In the final analysis, the instructional objectives become the critical component of lesson plans. Hence, it is important for teachers to become skilled in writing instructional objectives and to use them.

Ranking of 25 Instructional Objectives by Specialists in Curriculum*

	1	2	3
1.	( )	( )	(x)
2.	(x)	( )	( )
3.	( )	(x)	( )
4.	( )	(x)	( )
5.	( )	( )	(x)
6.	(x)	( )	( )
7.	( )	(x)	( )
8.	(x)	( )	( )
9.	( )	( )	(x)
10.	( )	( )	(x)
11.	(x)	( )	( )
12.	( )	( )	(x)
13.	(x)	( )	( )
14.	( )	( )	(x)
15.	( )	(x)	( )
16.	( )	(x)	( )
17.	( )	(x)	( )
18.	(x)	( )	( )
19.	( )	(x)	( )
20.	(x)	( )	( )
21.	( )	( )	(x)
22.	(x)	( )	( )
23.	( )	( )	(x)
24.	( )	( )	(x)
25.	( )	(x)	( )

*You might mark in the parentheses above your own rankings for making a comparison.



REFERENCES

Selected Readings

Numerous books, papers, and journal articles have been written about behaviorly stated objectives. The following is a sample of these and includes works by some of the most energetic proponents of objectives. We encourage the reader to pursue these selections with the purpose of broadening understanding and knowledge about this subject.

Bloom, Benjamin S. (ed.) *Taxonomy of educational objectives: the affective domain.* New York: David McKay Company, Inc., 1956.

Bloom, Benjamin S. (ed.) *Taxonomy of educational objectives: the cognitive domain.* New York: David McKay Company, Inc., 1956.

Deno, Stanley R., and Jenkins, J. R. *Evaluating pre-planned curriculum objectives.* Newark, Delaware: University of Delaware, 1967.

Deterline, William A. The secrets we keep from children. *Educational Technology,* February 1968, 8, 7-10.

Esbensen, Thorwald. Writing instructional objectives, *Phi Delta Kappan,* January 1967, 48, 246-247.

Gange, Robert M., A psychologist's counsel on curriculum design, *Journal of Research in Science Teaching,* 1963, 1, 27-32.

Krathwol, David R., Stating objectives appropriately for program, for curriculum and for instructional materials development, *Journal of Teacher Education,* March 1965, 16, 83-92.

Lynch, William W., Instructional objectives for the mentally retarded child, *Bulletin of the School of Education,* 1967, Indiana University.

Mager, Robert F., *Preparing instructional objectives.* Palo Alto: Fearon Publishers, 1962.

Mager, Robert F., Deriving objectives for the high school curriculum, *National Society for Programmed Instruction,* March 1968, III, 7-14.

Tyler, Ralph W., *Basic principles of curriculum and instruction.* Chicago: The University of Chicago, 1950.

TEACHER EVALUATION

Identify lesson and specify activity.

Lesson No.:_____ Lesson Title: _____

_____

Check:

Content: Very appropriate_____ Somewhat appropriate _____ Not appropriate _____

Suggestions
for teacher: Very helpful _____ Somewhat helpful _____ Not helpful _____

Resources: Very helpful _____ Somewhat helpful _____ Not helpful _____

Evaluative Statement:

Suggestions for Revision: